



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,314	06/27/2001	Phillip B. Blankenship	731266.02634	2106

72766 7590 10/27/2008  
Hall, Estill, Hardwick, Gable, Golden &  
Nelson, P.C.  
100 North Broadway  
Chase Tower, Suite 2900  
Oklahoma City, OK 73102

EXAMINER
----------

FLETCHER III, WILLIAM P

ART UNIT	PAPER NUMBER
----------	--------------

1792

MAIL DATE	DELIVERY MODE
-----------	---------------

10/27/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

09/893,314

**Applicant(s)**

BLANKENSHIP ET AL.

**Examiner**

William P. Fletcher III

**Art Unit**

1792

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 37-40 and 42-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 37-40 and 42-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The compliant amendment filed July 24, 2008, and the remarks filed April 17, 2008, are noted with appreciation.
2. Claims 37-40 and 42-59 remain pending.

### ***Response to Arguments***

3. The rejections set forth in the prior Office action are withdrawn in view of the amendment.

### ***Allowable Subject Matter***

4. The indicated allowability of the subject matter previously recited in claim 41 is withdrawn in view of the newly discovered reference(s) to Fields (US 5,973,037 A). Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 37-39, 42-45, and 50-59, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fields (US 5,973,037 A, newly cited) in view of Helf (US 6,248,396 B1, previously cited) and Harvey et al. (*Fatigue Resistance...*, Oct. 1995, previously cited).

A. Claim 37:

- i. Collins teaches a process for making an asphalt mixture for paving a roadway. The asphalt mixture comprises a polymer-modified binder and an aggregate. See the abstract and 4:60.
- ii. This reference does not expressly teach any hard aggregate, which reads on the claimed "less than 93% by weight," which is inclusive of 0%.
- iii. This reference also teaches that the polymer-modified binder is mixed under low shear blending conditions. See 3:55-60.
- iii. Further, the Examiner notes that this claim does not actually require that the asphalt mixture be applied as an interlayer. It is the Examiner's position that the recitation of "interlayer" in this claim amounts to more than a mere statement of intended use, since the stability and fatigue tests are performed in light of this end use, but does not rise to the level of expressly requiring the asphalt mixture to be applied as an interlayer.

Consequently, the Examiner interprets this claim as requiring the asphalt mixture be *capable* of use as an interlayer.

Since Fields broadly teaches a flexible asphalt paving mixture [see 2:39 ff.], it is the Examiner's position that Fields' mixture is suitable for and capable of use in any known flexible asphalt paving application. As noted in the prior Office actions, Helf demonstrates that it is known to apply a flexible asphalt layer as a stress absorbing interlayer. See 8:54 ff. Consequently, it is the Examiner's position that, in view of Helf and based upon its flexibility, the asphalt mixture of Fields is *capable* of serving as a stress absorbing interlayer, absent evidence to the contrary.

iv. Finally, while Fields clearly teaches that the flexibility of the asphalt mixture is of concern in the invention [5:39 ff.], and while it has been established on the record that stability and fatigue testing is known in the art, Fields does not explicitly state that stability and fatigue tests are performed on the asphalt mixture and that said tests are used to select an appropriate asphalt mixture.

Harvey teaches that both stability and fatigue testing — in particular, the Hveem Stability Test (HST) and the Flexural Beam Stability Test (FBST) — are known in the art as tests performed during asphalt mix design and describes the role of these tests in the process of formulating and selecting an asphalt mixture suitable for a given application. See xvi:12-17; 1:3-5 and 8-9; 2:9-12, 17, 18, and footnote; 3:1-2, 13-15, 17-18,

and 23-4:1; 8:1-4; 18:1-2, 4-6, and 9-11; 54:17-55:1; 76:22-77:2; 77:9-12; 78:7-9 and 12-14. Consequently, it would have been obvious to one skilled in the art to modify the process of Fields so as to utilize stability and fatigue testing — in particular HST and FBST — as part of the mix design to determine the best formulation suitable for the given asphalt application.

B. Claims 38, 39, 42-44, 53, and 55-59:

i. It is clear that the results of the tests that are deemed suitable depend upon the desired environment and application. For a given environment and application, it would have been obvious to optimize the proportions of asphalt constituents to achieve the desired durability, etc. Consequently, it would have been obvious to one skilled in the art to optimize the asphalt mixture by routine experimentation, absent evidence of criticality. See MPEP 2144.05.

ii. Further, Harvey teaches many of the claimed measurements as part of the mix design process. It is the Examiner's position that such measurements are common and well-known in asphalt mix design.

C. Claim 45:

i. Fields, Helf, and Harvey are applied herein again as above.

ii. Fields does not expressly teach that the asphalt mixture is applied as an interlayer and that an overlayer is applied thereto.

iii. As noted above, Helf teaches a flexible asphalt mixture applied as a stress reducing interlayer that is over-coated with an over-layer. Helf

further teaches that such a flexible interlayer prevents crack propagation in a road resurfacing application.

iv. Consequently, based on what the teachings of these references, taken as a whole, would have suggested to one skilled in the art, it would have been obvious to one skilled in the art to apply the asphalt mixture of Fields as an interlayer, subsequently over-coated with an over-layer. One skilled in the art would have been motivated to do so by the desire and expectation of preventing the propagation of cracks from an underlying surface, as taught by Helf.

v. Finally, it is the Examiner's position that determining the thickness of the over-layer occupies an elementary level of inquiry in the art and would have been obvious to one skilled in the art so as to yield a layer that is suitable of its desired use and that can successfully support traffic thereon.

D. Claim 50:

i. While none of the cited references teach this feature, it is the Examiner's position that it is common in the art to drive over-layer application equipment atop the interlayer, which reads on the limitations of this claim.

E. Claims 51 and 52:

i. While none of the cited references teach these features, it is the Examiner's position that SB/SBS polymer modified hot mix asphalt over-

layers are common in the art and it would have been obvious to one skilled in the art to apply such as the over-layer.

8. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fields in view of Helf and Harvey, as applied to claim 37 above, further in view of Grubba (US 5,795,929 A, newly cited).

- A. Fields, Helf, and Harvey are applied as detailed above.
- B. None of these references teaches the claimed cross-linking agent.
- C. Grubba teaches that it is known in the art to add cross-linking agents to impart desired properties to the asphalt mixture. See 1:52 ff.
- D. Consequently, it would have been obvious to one skilled in the art to modify the composition of Fields so as to add a cross-linking agent to achieve desired properties for the asphalt mixture.

9. Claim 46, 47, 49, and 54, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fields in view of Helf and Harvey, as applied to the claims above, further in view of Walter (US 3,907,582 A, previously cited).

- A. The combined teaching of Fields, Helf, and Harvey is detailed above.
- B. As noted previously in the record, Walter teaches cooling between layers and forming an overcoat with a thickness of 1 inch [4:41].
- C. It would have been obvious to one skilled in the art to modify Fields, Helf, and Harvey, so as to utilize such cooling and such a thickness. One of ordinary skill would have been motivated to do so by the desire and expectation of successfully providing a road overlay.



10. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fields in view of Helf and Harvey, as applied to claim 45 above, further in view of McDonald (US 3,891,585 A, previously cited).

- A. The combined teaching of Fields, Helf, and Harvey, is detailed above.
- B. None of these references teaches sweeping the roadway and sealing cracks prior to applying the interlayer.
- C. As noted previously on the record, McDonald teaches sweeping the roadway and sealing the cracks prior to forming an asphalt/polymer layer thereon [9:18-41]. This is done so that underlying fatigue cracking is not reflected in the new layer.
- D. Consequently, it would have been obvious to one skilled in the art to modify Fields, Helf, and Harvey, so as to sweep the roadway and seal the cracks. In so doing, underlying fatigue cracks are not reflected in the new layer.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Sunday, 5:00 AM - 12:00 PM and Monday through Friday, 5:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/  
Primary Examiner, Art Unit 1792

October 23, 2008